

Georgia Department of Transportation

## Partnerships for Centerline Maintenance



### **The Challenges of Maintaining State Transportation Basemaps**

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## Overview

- GIS @ GDOT
- Partnership Model
- Phase I - Public Org Partnership
- Maintenance Components

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## GIS @ GDOT

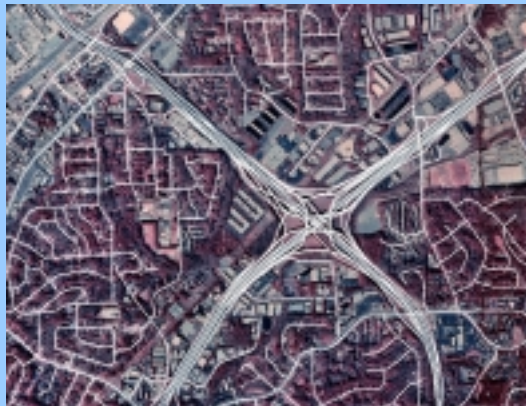
- **5 Year Development Effort**

- Mylar Conversion
- Digital Line Graph Feature (DLG-F)
- Corrected to 1993 DOQQ's
- 1:12,000 National Map Accuracy Standards
- Transportation Framework

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## “Seamless” GIS Presentation

- Clean Representation
  - Uniform scale
  - One projection
  - Vertical Integration
- Flexible Mapping



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## Planned Development

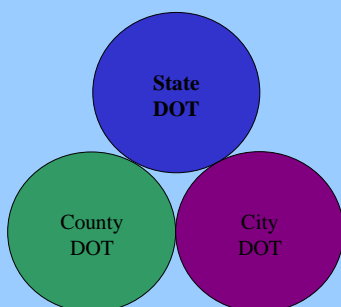
- Addressing & Route Enhancements
- Roadway Facilities
- Transit, Rail, Airports, Ports
- Environmental Features
- Photolog
- Elevation Models



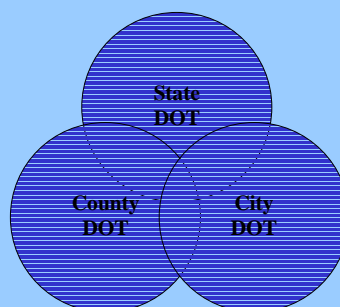
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## Georgia Transportation Data

Old World



New World



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## Partnership Model

1. Data is only as good as the source
2. Better sources and development opportunities exist at national and local levels
3. Standardization enhances the ability to take advantage of those opportunities
4. Successful maintenance incorporates each opportunity into an overall support strategy

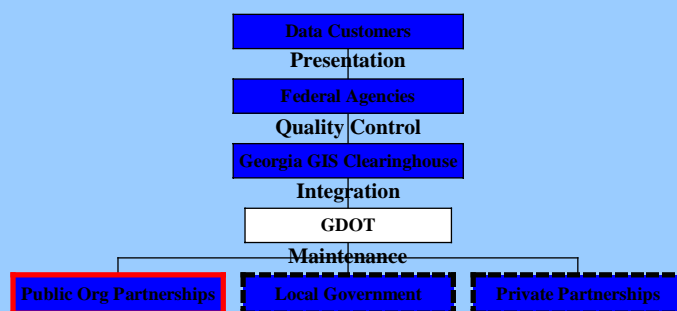
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## Critical Success Factors

- Relationship with the “data source”
- Knowledge of Opportunities
- Understanding Standards
- Support Resources
  - Technical Oversight
  - Financial
  - Tools

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## Partnership Architecture



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## Best Practices

- Understand your limitations
- Develop a sustainable architecture
- Be cost effective
- Start small
- Field test in-house
- Always pilot
- Plan implementation
- Actively monitor
- Control implementation



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## Regional Development Centers

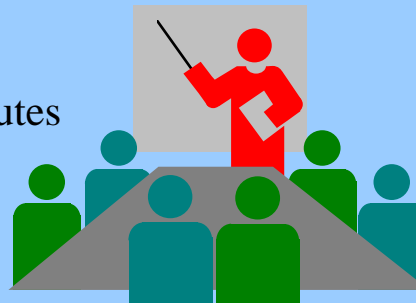
- Maintain GIS for local governments to support planning
- Provide GIS support services
- Maintain strong working local relationships



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## Objectives

- Identify roads
- Collect centerlines
- Collect basic attributes
- Quality control
- Processing
- Metadata



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## Materials

- Trimble - ProXRS
- Satellite DGPS
- Trimble Pathfinder Office
- ESRI - ArcView & ArcInfo
- RTSE - SMMS



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## Maintenance Components

Consistency

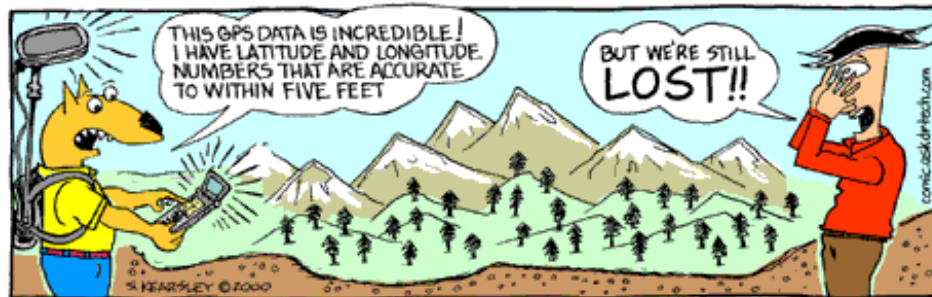
Completeness

Accuracy

Currency



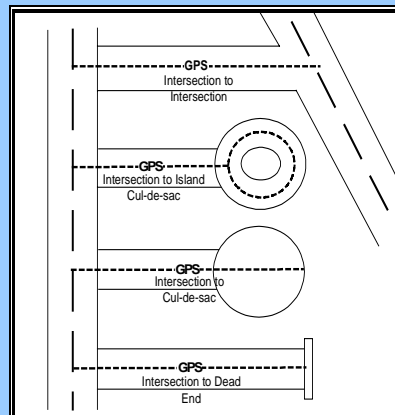
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## Consistency

- **Data Collection Standards**
  - Data Dictionary
  - Equipment Parameters
  - Common Scenarios
- **Processing Standards**
  - Software Settings
  - QA/QC
  - Metadata
- **Delivery Standards**
  - Formats
  - Data Transfer



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## Completeness

- All roads not on the “map”
- Divided Highways
- Non-field verified roads
- Work with GDOT Road Inventory Crews
- Involve locals
- Data without metadata is incomplete

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## Accuracy

- Starts with the Equipment
  - Use 12 Channels
  - Set the Collection Parameters
  - Over-sample
- Satellite DGPS
  - Post-Processing?
- Depends on the Collector
  - Stamp the Data

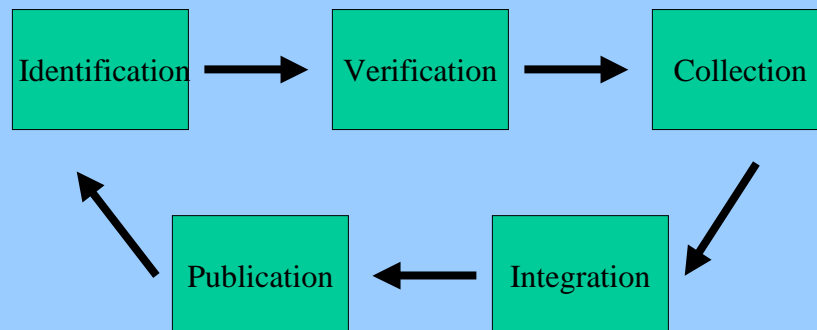
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## Currency

- Version Control
- Automated Workflow Processing
- Annual Updates to Instant Updates

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## Maintenance Process



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## Questions?



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